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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,011	02/06/2004	Guanghua Wu	356952001300	8420
25226	7590	06/30/2005	EXAMINER	
MORRISON & FOERSTER LLP			CHAPMAN JR, JOHN E	
755 PAGE MILL RD			ART UNIT	
PALO ALTO, CA 94304-1018			PAPER NUMBER	
			2856	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/774,011

Applicant(s)

WU ET AL.

Examiner

John E. Chapman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 16-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/18/04; 5/12/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant's election without traverse of the invention of Group I in the reply filed on June 7, 2005 is acknowledged. Claims 16-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear how the proximal end of the suspended structure is secured to the anchor region "opposite substantially an entire length of the first side of the first recessed region." The proximal end 104-1 in Fig. 1B appears to extend along only a fraction of a first side of the recessed portion 132 and not along an entire length of the first side of the recessed region.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10, 12 (as best understood), 13 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Iwata et al.

Iwata et al. discloses a micromechanical device comprising a first semiconductor layer 2 having a first recessed region 3 formed therein and a cantilever beam 5 formed in semiconductor layer 6 secured to the first wafer. Iwata et al. further discloses in Fig. 12b a proof mass 33 and flexure region 32 that is thin relative to the anchor region, and further teaches that the proof mass 33 may be formed on the lower side of the end portion of the cantilever beam 5 (column 11, lines 34-37).

Regarding claim 12, the proximal end of the cantilever 5 extends along substantially an entire length of the first side of recessed region 3.

Regarding claim 13, the seismic mass comprises the proof mass 33 in a first sublayer 35 as well as a cantilever portion 5 in a second sublayer 37.

7. Claims 1-6, 11, 13 and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Iwata et al.

The only difference, if any, between the claimed invention and the prior art consists in forming a flexure region that is thin relative to the anchor region. Iwata et al. appears to teach

forming the cantilever beam 5 in Fig. 1 from a proof mass 33 and flexure region 32 that is thin relative to the anchor region as shown in Fig. 12b, and, if not, it would have been obvious to form a flexure region 32 that is thin relative to the anchor region in the same manner as shown in Fig. 12b when forming the proof mass 33 on the lower side of the end portion of the cantilever beam 5.

Regarding claims 6 and 13, the first sublayer 35 and second sublayer 37 define the proof mass 33.

8. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. as applied to claim 1 above, and further in view of Takebe et al.

The only difference between the claimed invention and the prior art consists in forming a second recessed region and forming a diaphragm opposite the second recessed region. Takebe et al. discloses a cantilever in Fig. 1(a) and a diaphragm in Fig. 1(b) and teaches forming a semiconductor sensor having both a cantilever for sensing acceleration and a diaphragm for sensing pressure (column 4, lines 10-15). It would have been obvious to one of ordinary skill in the art to provide the apparatus of Iwata et al. with a second recessed region and a diaphragm opposite the second recessed region in order to form a semiconductor sensor having both a cantilever for sensing acceleration and a diaphragm for sensing pressure, as taught by Takebe et al.


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shinohara discloses a micromechanical device in Fig. 5 comprising a lower stopper

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26 having a first recessed region formed therein and a cantilever beam 23 having a flexure region 22 formed in a semiconductor layer 21.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John E Chapman  
Primary Examiner  
Art Unit 2856